NOTE XII.

NOTE ON THE ASCALAPHIDAE (PLANIPENNIA) DESCRIBED BY LINNAEUS

BY

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Linnaeus has described two species of this family in his genera *Hemerobius* and *Myrmeleon*. The *Hemerobius longicornis* L., Mus. Lud. Ulr. p. 402, n. 2 (1764), is after his short description certainly the well known *Ascalaphus longicornis* (L.) that occurs in Switserland, Italy, France, Spain and Algeria. The second described *Myrmeleon barbarum*, Syst. Natur. Ed. XII, p. 914, n. 5 (1768), however, is misunderstood by the authors. Fabricius, the author of the genus *Ascalaphus*, System. Entom. p. 313 (1775), enumerates it as the first species in this genus and gives a copy of Linnaeus' description. But this genus, being restricted by Lefèbvre and the later authors for the well-known palaearctic species with coloured wings, cannot be limited to *barbarum* again. Most of the later authors, probably only judging after the locality and not comparing Linnaeus' description, have described different species with coloured wings as *Asc. barbarus*. So Latreille, Rambur, Lucas and many others held it for the, in North-Africa common, *Asc. ictericus* Charp. Olivier and Charpentier have described the european *coccajus* Schiff., Petagna *italicus* F. and Burmeister *longicornis* L. under the name *Asc. barbarus* L.

Stein (1863) and Hagen, having used the description, were brought to the conclusion that the south-european *Asc. australis* F. is a synonym of *Asc. barbarus* (L.), and

australis being the type of the genus *Theleproctophylla* Lefèbvre, the name was changed in *Th. barbara* (L). All later authors accepted this synonymy.

Comparing for my monograph the original descriptions, I found that *Asc. australis* F. cannot be the same as *barbarus* (L.). I give here an exact copy of Linnaeus' description: »*Myrmeleon barbarum:*

M. alis hyalinis, antennis longitudine corporis, clava suborbiculata.

Corpus *M. formicario* minus, nigrum, testaceo-variegatum, excepto abdomine hirsutum. Antennae filiformes nigrae, apice clava rhombeo-orbiculata, compressa. Oculi fusci, quibus incumbit quasi palpebra ovata, testacea. Alae deflexae, lanceolatae, hyalinae, reticulatae, puncto marginali fusco, ut in Libellulis. Abdomen nigrum linea dorsali flava; subtus flavo-variegatum. Pedes flavi. Frons pilosa.

Habitat in Barbaria."

His quotation of Schaeffer's *libelloides* has nothing to do with this species. Though the description is short and not pointing out the distinctive characters of the species, it is impossible that it is referable to *australis* F., as the wings of the latter are not lanceolate but more dilated towards the apex, with a round brown spot under the pterostigma and Linnaeus only indicates the fuscous pterostigma. The abdomen is yellow, with a brown stripe in the middle of the dorsum, and for *barbarus* is indicated a black abdomen with a yellow stripe on the dorsum and the underside variegated with yellow.

Among the Ascalaphidae that I examined for my monograph (about 3000), I never saw a *Theleproctophylla australis* F. from North-Africa, and the indication North-Africa by Hagen and others is only based upon Linnaeus. The genus seems to be limited to Spain, the northern coast of the Mediterranean and Asia-minor. Neither Lucas nor Mac Lachlan mention in their publications on Neuroptera of Algeria an *Ascalaphus* that can be *Th. australis* (F.). Lucas, however, describes and figures (Explorat. scient. de l'Algérie,

Insect. p. 137, pl. 3, Figs. 5, 5*a*) under the name *Bubo hamatus* Klug, a species not being a *Bubo* at all, but belonging to the asiatic genus *Helicomitus* Mc. Lachl. and that also wholly agrees with Linnaeus' description. Mac Lachlan describes in the Transact. Ent. Soc. Lond. 1898, p. 160, under the name *Bubopsis gravidus*, a female from Algeria that, after the description must be *barbarus* (L.). Though I cannot examine his type at present, I feel sure that it does not belong to *Bubopsis*. The types of Lucas from Algeria (Paris Mus.) and specimens from Tanger (Brussels Mus.) agree wholly with Mac Lachlan's and Linnaeus' descriptions. Apparently Linnaeus' type was a ♀, as the ♂♂ have the colour of the abdomen more yellow and the black much more reduced.

Myrmeleon barbarum L. must also be ranged in *Helicomitus* Mc. Lachl., which genus was erected for a number of indian species, described by Walker in his famous "Catalogue". The type is *Asc. insimulans* Walk. from India, a ♂, of which the antennae are remarkably twisted in the basal half. Mac Lachlan held this formation for natural and based his genus upon it as a character, but as I examined many ♂♂ of the same species with straight antennae, I believe that they are unnaturally deformed after death. I saw the same deformation by ♂♂ of *Bubo festivus* Rbr. from Africa, that also belongs in this genus. *Helicomitus* was hitherto only recorded from Asia where, after the extensive materials that I examined, only occurs one species that varies very much in size and in the colour after the degree of maturity. After a careful examination of all the types, I must bring all the names under *dicax* Wlk. from India. Later authors as Gerstaecker not being able to distinguish *Helicomitus* from *Suphalasca* have augmented the number of synonyms and Mac Lachlan was also unable, after the insufficient material he could compare, to distinguish the genera in an intelligible manner. I regard *Helicomitus* only as a subgenus of *Suphalasca* which I will work out in my monograph.

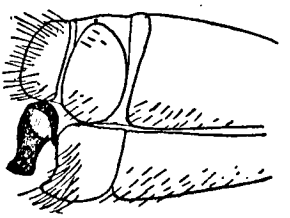
The synonymy of the asiatic species is in chronological order: *Asc. dicax* Wlk. = *sinister* Wlk. = *immotus* Wlk. = *procax* Wlk. = *odiosus* Wlk. = *insimulans* Wlk. = *cervinus* Hag. = *Suph. placida* Gerst. — Westwood (1888) has described the development of this species.

In North-Africa occurs the smaller *H. barbarus* (L.) but in the tropical regions of this continent lives the larger and also very variable *Bubo festivus* Rbr. Mac Lachlan separated from the latter as a new species *Suphalasca africana* from Madagascar. As I saw the type and an extensive series of fresh specimens from this island, I cannot be of his opinion because they offer no differences with *festivus* from the Continent. Mac Lachlan ranged the latter in his genus *Encyoposis*, but this name must be reserved for the type *flavilinea* (Wlk.) and some new forms. All the others described in this genus, excepted perhaps his *longistigma* which I have not seen, belong to other genera.

Gerstaecker described from German East-Africa the *festivus* as *Suphalasca rutila*, and Kolbe's *Encyoposis bilineata* and *flavostigma* from the same country belong also to this species, as I could state by examining the types. The synonymy is therefore: *festivus* Rbr. = *africana* Mc. Lachl. = *rutila* Gerst. = *bilineata* Kolbe = *flavostigma* Kolbe. The *Encyoposis amicus* Mc. Lachl., from Natal, is only a lighter coloured form of the same species and probably also a synonym.

Comparing large series of the 3 species, the similarity is so striking, that it is hardly possible to decide without knowing the locality to which form a specimen belongs. The poststigmatical aera or apical aera of the wings seems to be generally a little broader in the african species, it consists of 3 rows of cells in the fore wings, the middlest of which is nearly always complete, where in the indian species this row is more or less incomplete. But this character is so subtile, that it is only clear when comparing a large series. It is also nearly impossible to distinguish the small north-african *barbarus* from the small form of *dicax* from Asia-minor, which has about the same size.

I also examined the male genital organs, which are of a very primitive structure. The app. sup. are semicircular short valves and the genitalvalve is short, triangular at the underside, without any particularities. The penis is a short, truncated chitinous hump, which is only visible in chitin-preparations. I examined them of many specimens of the three species, but could not find any important difference.



After all I presume, that only one very variable species exists.

Leyden Museum, November 1906.